IN THE CLAIMS

1. (Previously Presented) A method for manufacturing ceramic hollow fibers from nanoscale powders, the method comprising:

manufacturing a ceramic mass by transforming a nanoscale metal oxide, carbide, nitride or sulfide powder with an oxycarboxylic acid, compounded to the ceramic mass with at least one solvent and at least one polymeric binder;

extruding or spinning the ceramic mass to hollow fiber blanks; and

sintering the blanks.

2. (Previously Presented) The method according to claim 1 wherein the ceramic mass has a solids content of at least 20 vol%.

3. (Previously Presented) The method according to claim 1wherein the nanoscale powder is aluminum oxide, zirconium oxide, yttrium stabilized zirconium oxide, titanium oxide, silicon carbide, tungsten carbide and/or silicon nitride.

4. (Previously Presented) The method according to claim 1wherein the oxycarboxylic acid is preferably trioxadecanoic acid or dioctaheptanoic acid.

5. (Previously Presented) The method according to claim 1wherein the solvent is water and.or ethyleneglycol, propyleneglycol, diethyleneglycolmonoethylether, diethyleneglycolmonobutylether, especially a mixture of ethyleneglycol and diethyleneglycolmonobutylether.

6. (Previously Presented) The method according to claim 1wherein as polymer binder, a cellulose, methylcellulose, ethylcellulose, polyvinylalcohol, ambergum, a polyacrylate and/or polymethacrylate is utilized.

7. (Previously Presented) The method according to claim 1wherein as polymeric binder a at least an acrylate and/or methacrylate is utilized, which is polymerized after the shaping by using a radical starter.

8. (Previously Presented) The method according to claim 1wherein an external diameter of the ceramic hollow fibers is < 500 µm.

9. (Previously Presented) The method according to claim 1wherein a extrusion mass is placed in a special container or in a pressure vessel of a spinning device and conveyed through the spinning device between room temperature and 300 °C.

10. (Previously Presented) The method according to claim 1wherein the hollow fibers are be sintered to densities of > 97 % of the theoretical density.

11. (Previously Presented) The method according to claim 1wherein porous hollow fibers are manufactured having a pore size, dependent on the sintering conditions (temperature, pressure, time, atmosphere) and between 0.5 nm and 1000 nm.

12. (Previously Presented) The method according to claim 11further comprising adding porous hollow fibers active carbon to the ceramic mass in an amount from 5 to 20 wt% as a template.

13. (Currently Amended) ~~Ceramic hollow fibers~~ A method for manufacturing ceramic hollow fibers from nanoscale powders the fibers having ~~comprising~~ an external diameter of < 500 µm ~~containing~~ and contain a reaction product from a nanoscale metal oxide, carbide, nitride or sulfide powder, with an oxycarboxylic acid and at least one polymeric binder, the method comprising:~~.~~

manufacturing a ceramic mass by transforming the nanoscale metal oxide carbide, nitride or sulfide powder, with the oxycarboxylic acid, compounded to the ceramic mass with at least one solvent and at least one polymeric binder;

extruding or spinning the ceramic mass to hollow fiber blanks; and

sinitering the blanks.

14. (Previously Presented) The method according to claim 1 further comprising using the ceramic mass for forming ceramic structures by ceramic silk screening.

15. (Previously Presented) The method according to claim 1 further comprising using the ceramic hollow fibers for the manufacture of a web that retains shape when sintered.

16. (Previously Presented) The method according to claim 1 further comprising using the ceramic hollow fibers for metal, polymer and ceramic matrix reinforcements, for artificial organs, for components in microsystems for optical waveguides, for ceramic membranes, for the solid electrolyte in fuel cells (SOFC), for tissue engineering and for the manufacture of extremely light weight ceramic parts for temperature stressed components like heat shields and brake systems.

17. (Previously Presented) The method according to claim 1 further comprising using the ceramic hollow fibers for the manufacture of solid electrolytes in the high temperature fuel cell (SOFC).

18. (Previously Presented) The method according to claim 14 further comprising using the structures formed by ceramic silk screening for insulation coatings, functional coatings, protective coatings for sensors, actuators and displays.